

REMARKS

Claims 1-34 are present in the application. Claims 1, 17, and 18 are amended herein. A marked-up copy of these claims is appended hereto. New claim 34 is presented herein for the first time. No new matter is added to the application by virtue of these amendments.

Petition to Make Special

In the Petition Decision granting Applicant's Petition to Make Special, the Director of Technology Center 1600 stated that no copy of a form PTO-1449 was included with the petition nor was a form PTO-1449 filed in the application. Applicant respectfully apologizes for inadvertently failing to include a copy of the form PTO-1449 with the petition. However, a form PTO-1449 was filed in the application. Enclosed is a copy of a postcard receipt showing that the PTO received such a form PTO-1449 on September 18, 2000. Applicant therefore assumes that the PTO has misplaced or lost this form PTO-1449. A substitute copy of the form PTO-1449 is enclosed herewith to complete the record.

Response to Restriction Requirement

The Examiner has required restriction under 35 U.S.C. § 121 to one of the following groups of claims:

Group I, claims 1-9, 11, 12, 16-18, and 23, allegedly drawn to a method for breeding diploid hybrid plant lines exhibiting apomixis by sexual crossing from a set of diploid parental lines exhibiting differences in the time to flower induction and duration of floral development in response to various photoperiods, allegedly classified in class 800, subclass 271;

Group II, claims 10, 15, 18, and 23, allegedly drawn to a method of breeding for aneuploid plants exhibiting apomixis by sexual crossing from a set of parental lines exhibiting differences in the time to flower induction and duration of floral development in response to various photoperiods, allegedly classified in class 800, subclass 270;

Group III, claims 13, 14, 18, 23, and 25, allegedly drawn to a method of breeding for polyploid plants exhibiting apomixis by sexual crossing from a set of parental lines exhibiting differences in the time to flower induction and duration of floral development in response to various photoperiods, allegedly classified in class 800, subclass 271;

Group IV, claims 19, 20, and 26, allegedly drawn to a method of breeding for amphiploid plants exhibiting apomixis by sexual crossing from a set of parental lines exhibiting differences in ploidy, allegedly classified in class 298, subclass 269;

Group V, claims 18, 21, 22, 24, and 27, allegedly drawn to a method of making a plant exhibiting apomixis with somatic cell hybridization, allegedly classified in class 800, subclass 277;

Group VI, claim 18, allegedly drawn to a method of making a plant exhibiting apomixis with colchicine treatment, allegedly classified in class 800, subclass 276;

Group VII, claims 28-30, allegedly drawn to an apomictic diploid hybrid plant and apomictic progeny of that plant exhibiting apomixis, allegedly classified in class 800, subclass 298;

Group VIII, claims 30, 32, and 33, allegedly drawn to an apomictic aneuploid plant and apomictic progeny of that plant, allegedly classified in class 800, subclass 298;

Group IX, claims 30-33, allegedly drawn to an apomictic amphiploid plant and apomictic progeny of that plant, allegedly classified in class 800, subclass 304;

Group X, claims 30, 32, and 33, allegedly drawn to an apomictic polyploid plant and apomictic progeny of that plant, allegedly classified in class 800, subclass 304.

For the purpose of being responsive to the Examiner's restriction requirement, Applicant elects with traverse Group I, claims 1-9, 11, 12, 16-18, and 23.

Under MPEP § 803 there are two criteria that must both be met before a restriction requirement is proper: (1) The inventions must be independent or distinct as claimed, and (2) there must be a serious burden on the examiner if restriction is not required. The initial burden is on the examiner to provide reasons with respect to both of these requirements. MPEP § 803. The various types of distinct, or related inventions, as they are sometimes called, must fit within one of the categories described in MPEP §§ 806.05(a)-(i). Where the related inventions as claimed are shown to be distinct under the criteria of MPEP §§ 806.05(c)-(i), the Examiner, to establish reasons for insisting on restriction, must show by appropriate explanation one of the following: (a) separate classification, (b) separate status in the art, or (c) a different field of search. MPEP § 808.02. "Where, however, the classification is the same and the field of search is the same and there is no clear indication of separate future classification and field of search, no reasons exist for dividing among related inventions." MPEP § 808.02. For purposes of the initial requirement, a serious burden on the examiner may be *prima facie* shown if the examiner shows by appropriate explanation separate classification, separate status in the art, or a different field of search as defined in MPEP § 808.02. MPEP § 803. However, "[i]f the search and examination of an entire application can be made

without serious burden, the examiner must examine it on the merits, even though it includes claims to distinct or independent inventions." MPEP § 803.

The Examiner alleged that the "inventions of Groups VII-X are distinct," and, moreover, that they are unrelated, i.e., independent. As support for these conclusions, the Examiner alleged that the plants included in Groups VII-X may be classified in different classes and subclasses, are chemically and structurally distinct, the materials required to make and use one are not required for the others, and each may be made by different methods.

The Examiner further alleged that the methods of Groups I-VI are distinct from each other in that they are classified differently, that essential steps of one method is not required for the other methods, and that the methods produce chemically and structurally distinct products.

For the purpose of the following discussion it will be assumed, but not admitted, that the classification of the claims of Group I into class 800 subclass 271 is correct. Applicant notes that the claims of Group III are also allegedly classified in class 800 subclass 271. The Examiner has not shown separate classification, separate status in the art, or a different field of

search for Group I and Group III. Moreover, there would be no serious extra burden on the Examiner to search and examine these groups together. Therefore, these two groups should be searched and examined together.

Group II is allegedly classified in class 800 subclass 270. Subclass 270 contains methods breeding involving a mutation step. That is, a method classified in subclass 270 must include both breeding and mutagenesis steps. According to the note appended to the description of subclass 270, "Mutation encompasses the intentional or unintentional use of mutagenic agents such as EMS (ethyl methanesulfonate), energy sources such as x-rays, and any process step that results in mutation." The claims grouped by the Examiner in Group II do not mention a mutagenesis step. Therefore, it is respectfully submitted that Group II is incorrectly classified in class 800 subclass 270. The Examiner has not shown separate classification, separate status in the art, or a different field of search for Groups I, II, and III. Moreover, there would be no serious extra burden on the Examiner to search and examine these groups together. Therefore, it is respectfully submitted that these groups should be searched and examined together.

Group IV is allegedly classified in class 298 subclass 269. Class 298 contains land vehicles for dumping. It is therefore respectfully submitted that this alleged classification is of Group

IV is incorrect. The Examiner has not shown separate classification, separate status in the art, or a different field of search for Groups I, II, III, and IV. Moreover, there would be no serious extra burden on the Examiner to search and examine these groups together. Therefore, it is respectfully submitted that these groups should be searched and examined together.

Groups V and VI are allegedly classified in class 800 subclasses 277 and 276, respectively. It is respectfully submitted that even if these classifications are technically correct, there would be no undue burden on the Examiner to search and examine Groups V and VI together with Groups I-IV.

Groups VII and VIII are both allegedly classified in class 800 subclass 298. Groups IX and X are allegedly classified in class 800 subclass 304. The Examiner has not shown separate classification, separate status in the art, or a different field of search for Groups VII and VIII, or for Groups IX and X. Moreover, it is respectfully submitted that there will be no serious extra burden on the Examiner to search each of Groups VII-X with its corresponding method claims.

Therefore, it is respectfully requested that the Examiner reconsider the restriction requirement and withdraw it.

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Respectfully submitted,



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Version with Markings to Show Changes Made

1. (Twice Amended) A method for obtaining apomictic plants from sexual plants comprising:

(a) obtaining at least two sets of delineated lines from a plant species or group of related plant species that are differentiated by their flowering responses to various photoperiods and by their start times and durations of female developmental stages relative to development of nongametophytic ovule and ovary tissue; and

(b) hybridizing said sets of delineated lines, recovering seed from the hybridization, sowing [and cultivating] said seed, and selecting hybrid lines that contain genetic material of each said set of delineated lines such that asynchronous floral development, and therefore apomixis, is conferred.

17. (Twice Amended) A method for obtaining apomictic plants from sexual plants comprising:

(a) identifying [naturally occurring] divergence in flowering responses to various photoperiods within a plant species or group of related plant species;

(b) obtaining two sets of lines of said plant species or group of related plant species that are differentiated by their flowering responses to various photoperiods;

(c) identifying within and between said sets of lines divergence in start times and durations of female developmental stages relative to development of nongametophytic ovule and ovary tissues;

(d) obtaining two sets of delineated lines of said species or group of related species that are differentiated by their flowering responses to various photoperiods and by their start times and durations of female developmental stages relative to development of nongametophytic ovule and ovary tissues; and

(e) producing hybrid lines that contain genetic material of each said set of delineated lines such that asynchronous floral development, and therefore apomixis, is conferred by hybridizing said two sets of delineated lines, recovering seed from the hybridization, sowing [and cultivating] said seed, and selecting said hybrid lines.

18. (Twice Amended) A method for obtaining aposporic, diplosporic, or polyembryonic plants from sexual monocotyledonous or dicotyledonous plants comprising:

(a) identifying [naturally occurring] divergence in flowering responses to various photoperiods within a plant species or group of related plant species;

(b) obtaining two sets of lines of said plant species or group of related plant species that are differentiated by their flowering responses to various photoperiods;

(c) identifying within and between said sets of lines divergence in start times and durations of female developmental stages selected from the group consisting of archesporule formation, megasporogenesis, megagametogenesis, and early embryony relative to the development of nongametophytic ovule and ovary tissues selected from the group consisting of nucellus, integument, pericarp, hypanthium, and pistil wall;

(d) obtaining two sets of delineated lines of said species or group of related species that are differentiated by their

(i) flowering responses to various photoperiods such that divergence occurs within a member or across more than one member selected from the group consisting of short-day plants, long-day plants, dual-day-length plants, intermediate-day-length plants, ambiphotoperiodic plants, and day-neutral plants and

(ii) start times and durations of female developmental stages selected from the group consisting of archesporule formation, megasporogenesis, megagametogenesis, and early embryony relative to the development of nongametophytic ovule and ovary tissues selected from the group consisting of nucellus, integument, pericarp, hypanthium, and pistil wall

such that divergence occurs within one member or spans more than one member of such female developmental stages;

(e) producing by sexual reproduction [,] or somatic cell hybridization [, or colchicine induction technique] polyploid, triploid, diploid, or aneuploid lines [that contain genomes, chromosomes, or genes from each of said sets of delineated lines] such that apomixis is expressed.